

**AMENDMENT D**  
(37 C.F.R. 1.111)

**IN THE CLAIMS:**

Please amend claims 112, 114-116, 119-124, 126-129 and 132-134 in accordance with 37 C.F.R. 1.121.

Please cancel claims 125 and 131 without disclaimer to their content and without prejudice to their subsequent reintroduction into this or a future patent application.

Please add new claim 136.

The claims are attached herein on separate sheets.

## **AMENDMENT TO CLAIMS**

**[Deleted material is struck-through and added material is underlined]**

1.-111. (Canceled)

112. (Currently Amended) A chemical species comprising:

a ~~substantially pure~~ population of clusters of one of a molecule, a dimer, an atom and combinations thereof in combination with ~~one of~~ another molecule, dimer or atom, and any combination thereof,

wherein the clusters are detectable via peaks in mass spectrometry that are unidentifiable as an known conventional molecule, and

wherein ~~said the peaks in the mass spectrometry are unidentifiable as any known conventional molecule and the~~ clusters have no infrared signature for a gas or ultraviolet signature for a liquid ~~or other signature for a solid~~ under currently available detectors except corresponding signatures ~~other than a corresponding signature~~ of conventional molecules or dimers constituting the clusters.

113. (Previously Presented) The chemical species of Claim 112, wherein the species is formed by subjecting a substance to any one of an external magnetic field, external electromagnetic field, microwave, pressure, friction, and any combination thereof.

114. (Currently Amended) The chemical species of Claim 112, wherein the infrared signatures for gases or ultraviolet signatures for liquids ~~or other signatures for solids~~ due to conventional molecules and dimers constituting the clusters are altered because of the presence of peaks not existing in conventional signatures.

115. (Currently Amended) The chemical species of Claim 112, wherein the average density of the clusters is greater than that of the corresponding conventional molecules constituting said species and any of their combination under the same conditions of volume, pressure and temperature.

116. (Currently Amended) The chemical species of Claim 112, wherein an excess energy content is released from a thermochemical reaction of said ~~essentially pure~~ population of clusters as compared to the energy released by thermochemical reaction of any conventional molecular constituent and any combinations thereof.

117. (Previously Presented) The chemical species of Claim 116, wherein the excess energy content is due to a storage of energy in the structure of said clusters, said conventional molecules and said dimers constituting the clusters.

118. (Previously Presented) The chemical species of Claim 112, wherein said peaks in the mass spectrometry change in time while keeping constant the density.

119. (Currently Amended) The chemical species of Claim 112, wherein said ~~essentially pure~~ population of clusters has an excess adhesion to other substances when compared to the adhesion of any molecule constituting said clusters and any combinations thereof.

120. (Currently Amended) The chemical species of Claim 112, wherein said ~~essentially pure~~ population of clusters has an excess penetration within other substances as compared to that of any conventional molecule constituting said clusters or that of any of combinations thereof.

121. (Currently Amended) The chemical species of Claim 113, wherein said ~~essentially pure~~ population of clusters is formed from a substance having a single molecule.

122. (Currently Amended) The chemical species of Claim 113, wherein said ~~essentially pure~~ population of clusters is formed from a substance having at least two different molecules.

123. (Currently Amended) The chemical species of Claim 112, wherein said ~~essentially pure~~ population of clusters is a gas.

124. (Currently Amended) The chemical species of Claim 112, wherein said ~~essentially pure~~ population of clusters is a liquid.

125. (Canceled)

126. (Currently Amended) The chemical species of Claim 112, wherein said ~~essentially pure~~ population of clusters is a combination of combustible fuels ~~combustible fuel~~.

127. (Currently Amended) The chemical species of Claim 126, wherein said combustible fuels are fuel ~~is~~ essentially constituted by hydrogen and its clusters.

128. (Currently Amended) The chemical species of Claim 126, wherein said combustible fuels are fuel ~~is~~ essentially constituted by oxygen and its clusters.

129. (Currently Amended) The chemical species of Claim 126, wherein said combustible fuels are fuel ~~is~~ essentially constituted by oxygen and hydrogen bonded into clusters.

130. (Previously Presented) The chemical species of Claim 126, wherein carbon and its molecular composites have been essentially removed via chemical processes.

131. (Canceled)

132. (Currently Amended) The chemical species of Claim 126, wherein said combustible ~~fuel with is~~ **fuels are** gasoline, **hydrogen, oxygen and any combination thereof.**

133. (Currently Amended) The chemical species of Claim 126, wherein said combustible ~~fuel is~~ **fuels are** diesel fuel, **hydrogen, oxygen and any combination thereof.**

134. (Currently Amended) The chemical species of Claim 124, wherein said ~~essentially pure~~ population of clusters ~~is~~ **are** formed from molecules from at least two different liquids which are not soluble in each other.

135. (Previously Presented) The chemical species of Claim 134, wherein the two liquids which are not soluble in each other are water and oil.

136. (New) The chemical species of Claim 126, wherein said combustible fuels are natural gas, hydrogen, oxygen and any combination thereof.